

By Express Mail # EL503712193US · February 22, 2002

one channel, and wherein the cycle depth of the at least one channel varies along the circumferential direction of the cylinder such that the cycle depth is largest in regions where the wall thickness of the cylinder is largest and the cycle depth is smallest in regions where the wall thickness of the cylinder is smallest.

12. (New) The cylinder assembly of claim 11, wherein said at least one channel comprises a plurality of channels.

13. (New) The cylinder assembly of claim 11, wherein a pitch of said channels along a longitudinal direction of the cylinder is constant.

A17 14. (New) The cylinder assembly of claim 11, wherein the at least one channel comprises a rectangular cross-section.

15. (New) The cylinder assembly of claim 11, wherein the cylinder also forms bridges between adjacent windings of the at least one channel having a width in the longitudinal direction, the width of the channel being in the range including 0.7 to 1.2 times the width of the bridge.

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16. (New) The cylinder assembly of claim 11, wherein the at least one channel has a variable cycle depth having a largest cycle depth and a smallest cycle depth, the largest cycle depth being within the range of 3 to 5 times the smallest cycle depth.

17. (New) The cylinder assembly of claim 11, wherein the at least one channel has side walls arranged so that the width of the at least one channel increases from a radially inner portion to a radially outer portion of the at least one channel.

18. (New) The cylinder assembly of claim 17, wherein the side walls are arranged at an angle relative to one another, the angle being within the range including 8-15

A¹⁷ degrees.

19. (New) The cylinder assembly of claim 11, wherein the cylinder also forms bridges between adjacent windings of the at least one channel, wherein an average thickness of the bridges between two adjacent windings of the at least one channel is in the range of 1.5 to 4 times the average width of the channels.

20. (New) The cylinder assembly of claim 11, wherein said cylinder further comprises circumferential grooves respectively arranged proximate opposing ends of the cylinder such that said at least one channels opens into said circumferential grooves, and each of the inlet and outlet in the hollow-cylinder mantle open into one of the circumferential grooves.